

Application No.: 10/014268

Case No.: 52955US011

REMARKS

Claims 1-33 are pending. Claims 1-30 have been withdrawn from consideration. Reconsideration of the application is requested.

§ 102 Rejections

Claims 31 and 32 stand rejected under 35 USC § 102(b) as purportedly anticipated by GB 1,439,440 (Pedrick). Applicants respectfully traverse.

The present claims teach an apparatus for delivering gas at a controlled rate comprising, *inter alia*, “a) an article comprising at least one containment means comprising pressurized gas-filled microbubbles, *said gas being releasable on demand*,” and “c) a feedback and control means for releasing gas to an electrochemical power device *at a controlled rate determined by a load*.” Pedrick teaches a device which apparently consumes one “fuel pellet” per cycle, no more or less. It is apparently not capable of adjustment to consume more fuel per cycle in response to an increasing load. Therefore, Pedrick fails to teach or suggest a device that releases gas “at a controlled rate determined by a load,” as recited in the present claims, nor does the Pedrick device release gas “on demand”. Furthermore, Pedrick fails to teach or suggest an electrochemical power device as recited in the present claims.

Thus, the rejection of claims 1 and 2 under 35 USC § 102(b) has been overcome and should be withdrawn.

§ 103 Rejections

Claims 31-33 stand rejected under 35 USC § 103(a) as purportedly unpatentable over Monsler in view of US5,432,710 (Ishimaru) or US 5,009,067 (Scheffler). Applicants respectfully traverse.

The present claims teach an apparatus comprising “b) a means for causing release of said gas from said microbubbles by fracturing.” Each of these rejections under § 103(a) depend on the purported teaching of this element in Monsler, specifically at pages 4-5. However, Monsler instead teaches “The hydrogen can be released by heating the microspheres” (Monsler at 5). The Background Art section of the present Specification makes note of such methods: “in bulk hydrogen storage in glass microbubbles, the microbubbles are heated to temperatures on the

Application No.: 10/014268

Case No.: 52955US011

order of 250 °C or higher to cause release of the hydrogen by diffusion through the glass microbubble walls." (Specification at page 2, lines 1-3.) Monsler fails to teach or suggest element b) of the present claims, and therefore the rejection of claims 1-3 under 35 USC § 103(a) should be withdrawn.

In view of the above, it is submitted that the application is in condition for allowance. Examination and reconsideration of the application is requested.

Respectfully submitted,

August 30, 2007

Date

By: 

Philip Y. Dahl, Reg. No.: 36,115

Telephone No.: 651-737-4029

Office of Intellectual Property Counsel
3M Innovative Properties Company
Facsimile No.: 651-736-3833